

Claims

103 ✓ [c1]

✓ A dynamic prosthetic foot, comprising:

a sole having an anterior, toe section and a posterior, heel section;
 an ankle part that separates from said sole along a transverse parting line;
 said ankle part including a gradual upward bend and a vertically extending part;
 at least one longitudinally extending slot formed in said anterior section of said sole;

said at least one longitudinally extending slot dividing said anterior section of said sole into at least two sections so that said at least two sections respond independently to uneven terrain;

whereby a user of said prosthetic foot is able to ambulate across uneven terrain with less chance of falling as compared with a prosthetic foot lacking said at least one longitudinally extending slot.

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✓ The dynamic prosthetic foot of claim 1, further comprising:

at least one longitudinally extending slot dividing said posterior section of said sole into at least two sections so that said at least two sections respond independently to uneven terrain;

whereby a user of said prosthetic foot is able to ambulate across uneven terrain with less chance of falling as compared with a prosthetic foot lacking said at least one longitudinally extending slot dividing said posterior section.

[c3]

The dynamic prosthetic foot of claim 1, further comprising:

a longitudinally extending slot that divides said ankle part into a lateral pylon support and a medial pylon support.

[c4]

The dynamic prosthetic foot of claim 3, further comprising:

a lateral pylon connector secured to a trailing side of said lateral pylon support.

[c5]

The dynamic prosthetic foot of claim 3, further comprising:

a medial pylon connector secured to a trailing side of said medial pylon support.

[c6]

The dynamic prosthetic foot of claim 3, wherein said lateral pylon support has a greater thickness and thus less resiliency than said medial pylon support so that

externally imparted forces appearing on said lateral pylon support are transferred at least in part to said medial pylon support whereby a sound leg may oppose said transferred forces.

- ✓ [c7] The dynamic prosthetic foot of claim 1, wherein said transverse parting line is approximately half way between a toe end of said sole and a heel end of said sole.
- [c8] ✓ The dynamic prosthetic foot of claim 1, further comprising:
a convexity formed about mid-length of said sole to perform the function of a ball of a natural foot.
- [c9] ✓ The dynamic prosthetic foot of claim 1, further comprising:
a concavity formed about mid-length of said prosthetic foot to perform the function of an arch of a natural foot.
- [c10] A dynamic prosthetic foot, comprising:
a sole having an anterior, toe section and a posterior, heel section;
an ankle part that separates from said sole along a transverse parting line;
said ankle part including a gradual upward bend and a vertically extending part;
at least one longitudinally extending slot dividing said posterior, heel section of said sole into at least two sections so that said at least two sections respond independently to uneven terrain;
a longitudinally extending slot that divides said ankle part into a lateral pylon and a medial pylon;
said lateral pylon and said medial pylon each being adapted to be engaged at their respective uppermost ends to a prosthetic socket;
whereby a user of said prosthetic foot is able to ambulate across uneven terrain with less chance of falling as compared with a prosthetic foot lacking said at least one longitudinally extending slot that divides said posterior, heel section of said sole; and
whereby said lateral and medial pylons are adapted to be cut to a preselected length when said dynamic prosthetic foot is fitted to a residual limb.
- [c11] ✓ The dynamic prosthetic foot of claim 9, further comprising:

at least one longitudinally extending slot formed in said anterior section of said sole;

said at least one longitudinally extending slot dividing said anterior section of said sole into at least two sections so that said at least two sections respond independently to uneven terrain;

whereby a user of said prosthetic foot is able to ambulate across uneven terrain with less chance of falling as compared with a prosthetic foot lacking said at least one longitudinally extending slot that divides said anterior section of said sole.

- [c12] The dynamic prosthetic foot of claim 10, wherein said lateral pylon has a greater thickness and thus less resiliency than said medial pylon so that externally imparted forces appearing on said lateral pylon are transferred at least in part to said medial pylon whereby a sound leg may oppose said transferred forces.
- [c13] The dynamic prosthetic foot of claim 10, wherein said transverse parting line is approximately half way between a toe end of said sole and a heel end of said sole.
- claim 14 repeated* [c14] ✓ The dynamic prosthetic foot of claim 1, further comprising:
a concavity formed about mid-length of said prosthetic foot to perform the function of an arch of a natural foot.
- [c15] The dynamic prosthetic foot of claim 10, further comprising:
a convexity formed about mid-way between said concavity and said toe end of said sole, said convexity performing the function of a ball of a natural foot.
- [c16] The dynamic prosthetic foot of claim 10, wherein said lateral and medial pylons are laminated at respective uppermost ends thereof to a prosthetic socket.
- [c17] The dynamic prosthetic foot of claim 10, wherein said lateral and medial pylons are connected at respective uppermost ends thereof to a connector member and wherein said connector member is laminated to a prosthetic socket.
- [c18] The dynamic prosthetic foot of claim 10, wherein said lateral and medial pylons

are connected at respective uppermost ends thereof to a pyramid-receiving connector that engages a pyramid that depends from said prosthetic socket.